

The diagram illustrates a system architecture for a web-based shopping system, enclosed in a dashed boundary. The components and their interconnections are as follows:

- External Components:**
 - 24 CUSTOMER COMPUTER** and **26 CUSTOMER COMPUTER** are connected to the **28 INTERNET**.
 - The **28 INTERNET** is connected to the **22 WEB SERVER**.
 - The **34 EMAIL CONSTRUCTION MODULE** is connected to the **35 SIMPLE MAIL TRANSFER PROTOCOL (SMTP) SERVER**.
- Internal System Components (enclosed in a dashed box):**
 - 22 WEB SERVER** is connected to the **30 APPLICATION SERVER** via a bidirectional arrow.
 - 30 APPLICATION SERVER** contains:
 - 38 E-COMMERCE MODULE**, which includes:
 - 40 SHOPPING CART MODULE**, which contains the **42 STORED ORDER MODULE**.
 - 36 DYNAMIC WEB PAGE CONSTRUCTION MODULE**.
 - 34 EMAIL CONSTRUCTION MODULE**.
 - The **30 APPLICATION SERVER** is connected to the **32 DATABASE** via a bidirectional arrow.
 - 32 DATABASE** contains:
 - 44 WEB PAGE DATA**.
 - 46 WEB PAGE TEMPLATE DATA**.
 - 48 EMAIL TEMPLATE DATA**.
 - 50 STORED ORDER DATA**.

```
graph TD
    24[CUSTOMER COMPUTER] --- 28((INTERNET))
    26[CUSTOMER COMPUTER] --- 28
    28 --- 22[WEB SERVER]
    22 <--> 30[APPLICATION SERVER]
    30 <--> 32[DATABASE]
    30 --> 35[SMTP SERVER]

    subgraph 30_APPLICATION_SERVER [APPLICATION SERVER]
        38[E-COMMERCE MODULE]
        36[DYNAMIC WEB PAGE CONSTRUCTION MODULE]
        34[EMAIL CONSTRUCTION MODULE]

        38 -- contains --> 40[SHOPPING CART MODULE]
        40 -- contains --> 42[STORED ORDER MODULE]
    end

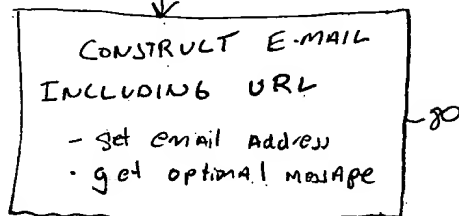
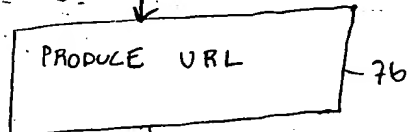
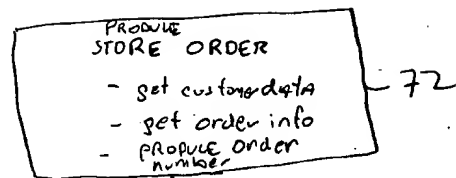
    subgraph 32_DATABASE [DATABASE]
        44[WEB PAGE DATA]
        46[WEB PAGE TEMPLATE DATA]
        48[EMAIL TEMPLATE DATA]
        50[STORED ORDER DATA]
    end
```

FIGURE 1

```

graph TD
    54[PURCHASE ORDER TABLE] --- 56[ORDER TYPE FEILDS]
    54 --- 58[ORDER NUMBER FIELD]
    54 --- 60[CUSTOMER INFO]
    54 --- 62[PRODUCT]
    54 --- 64[PRODUCT]
    64 --- 66[OPTION]
    64 --- 70[OPTION]
  
```

FIGURE 2



82 \Rightarrow [http://store.apple.com/.../APPLESTORE?SAVEDORDERNUMBER=735003 & lastName = o'malley](http://store.apple.com/.../APPLESTORE?SAVEDORDERNUMBER=735003&lastName=o'malley)

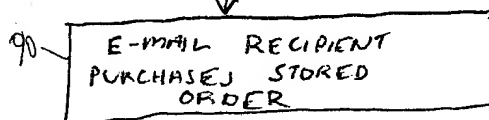
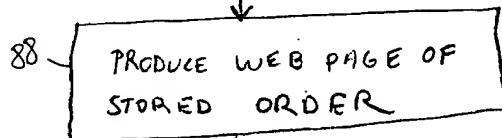
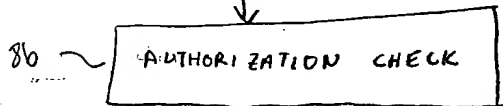
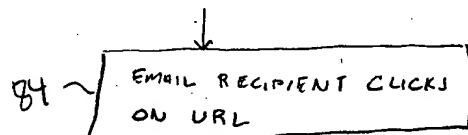
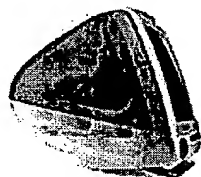


FIGURE 3

Apple Store

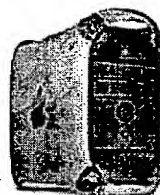
Welcome,
 Joseph
[Saved Orders](#)
[Change your Profile](#)



iMac

Presenting the all-new iMac.
Starting at

\$999



Power Mac G4

High performance redefined.
Starting at

\$1,599



iBook

More power and more choice.
Starting at

\$1,599



PowerBook

Desktop Movies to go.
Starting at

\$2,499



Get 64MB
 Extra RAM
 Free.
[Get the details.](#)



Special Promotion
 Buy an
 iBook with an
 HP Printer.



Special Promotion
 Buy an
 iMac with an
 HP Printer.

Suite Deal

Final Cut Pro and Media
 Cleaner Compression
 Suite-Broadcast Edition.
 Everything you need to take
 DV straight to the web.



[Click Here](#)

WebObjects

\$699
 Aggressive new price
 dropped from \$60,000 to \$699.

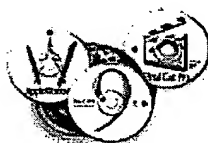
Cinema Display



Get a
 bigger
 canvas
 for your
 new G4.

Software

Browse a selection of
essential applications
and tools.



Select from... ▼

Servers

Choose a reliable,
 powerful, scalable, and
 fast server to meet your
 networking needs.



Select from... ▼

Accessories

Enhance your Macintosh
 with these useful
 add-ons.



Select from... ▼

¿Hable Español?

[Haga clic aquí](#)

Visit other Apple stores around the world:

Choose... ▼


AppleCare
 Help and support
 when you need it.

Special Deals

FIGURE 4A

Review saved order.

- Click on the Continue button to purchase saved items.

Or

- [E-mail](#) saved order.

Your order has been saved for later.

Web Order Number: **W735003**

Items you have selected	Part No.	Qty	Unit Price	Ext. Price
iMac 400MHz DV Special Edition	201R	1	\$1,499.00	\$1,499.00
Accessory kit	065-1945			
Graphite	065-2066			
128MB SDRAM - 1 DIMM	065-2042			
Quake III - Activision	T2469LL/A	1	\$49.00	\$49.00
Iomega USB Zip Drive	T2224LL/A	1	\$99.00	\$99.00

Subtotal Please note that your subtotal does not include sales tax or rebates. **\$1,647.00**

[Find out how to get your order for \\$37.72 per month!](#)

[Continue Shopping](#)

[E-mail](#)

[Continue](#)

You can also order from The Apple Store by calling 1-800-MY-APPLE.
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 See [Sales and Refunds Policy](#) for more information.

FIGURE 4B

000290 81620960

E-mail your order.

- E-mail your order along with a brief message.

Email Address

To send multiple e-mails, separate addresses with a comma.

Custom Message

Send

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FIGURE 4C

Fr m: <confirmation@apple.com>
T : <josepho@burnsdoane.com>
Date: 5/25/00 10:43AM
Subject: Order items saved by joseph o'malley

A message from joseph o'malley,

[empty message]

The following items have been saved for your reference on the Apple Store.
Click the link below to go directly to the Apple Store and view these items.

<http://store.apple.com/1-800-MY-APPLE/WebObjects/AppleStore?savedOrderNumber=735003&lastName=o'malley>

DATE SAVED: 05/25/00 - 10:40 AM Pacific Standard Time

SAVED ITEMS:

Part Number: Z01R
Product Name: iMac 400MHz DV Special Edition
Options:
065-2042 128MB SDRAM - 1 DIMM
065-1945 Accessory kit
065-2066 Graphite
Unit Price: \$1,499.00
Quantity: 1
Net Price: \$1,499.00

Part Number: T2469LL/A
Product Name: Quake III - Activision
Unit Price: \$49.00
Quantity: 1
Net Price: \$49.00

Part Number: T2224LL/A
Product Name: Iomega USB Zip Drive
Unit Price: \$99.00
Quantity: 1
Net Price: \$99.00

SUBTOTAL: \$1,647.00

Total does not include any applicable sales tax or any express shipping charges.

=====

FIGURE 4D

Review your order.

- ▶ Please confirm your order.
- ▶ Make sure you have everything that you need.



Instant Loan

A fast, easy way to own a fast, easy Macintosh. Click For Details



Get 64MB Extra RAM Free.

Get the details.

Items you have selected	Part No.	Est Ship	Qty	Unit Price	Ext. Price
Imega USB Zip Drive	T2224LL/A	2 days	<input type="text" value="1"/> Remove	\$99.00	\$99.00
iMac 400MHz DV Special Edition	Z01R	3 days	<input type="text" value="1"/> Remove	\$1,499.00	\$1,499.00
Graphite Accessory kit	065-2066				
128MB SDRAM - 1 DIMM	065-1945				
Quake III - Activision	T2469LL/A	2 days	<input type="text" value="1"/> Remove	\$49.00	\$49.00

Subtotal Please note that your subtotal does not include sales tax or rebates. **\$1,647.00**

[Update Subtotal](#)

[Find out how to get your order for \\$37.72 per month*](#)

[Continue Shopping](#)

[Save For Later](#)

[Check Out](#)

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FIGURE 4 E

000290 21620960

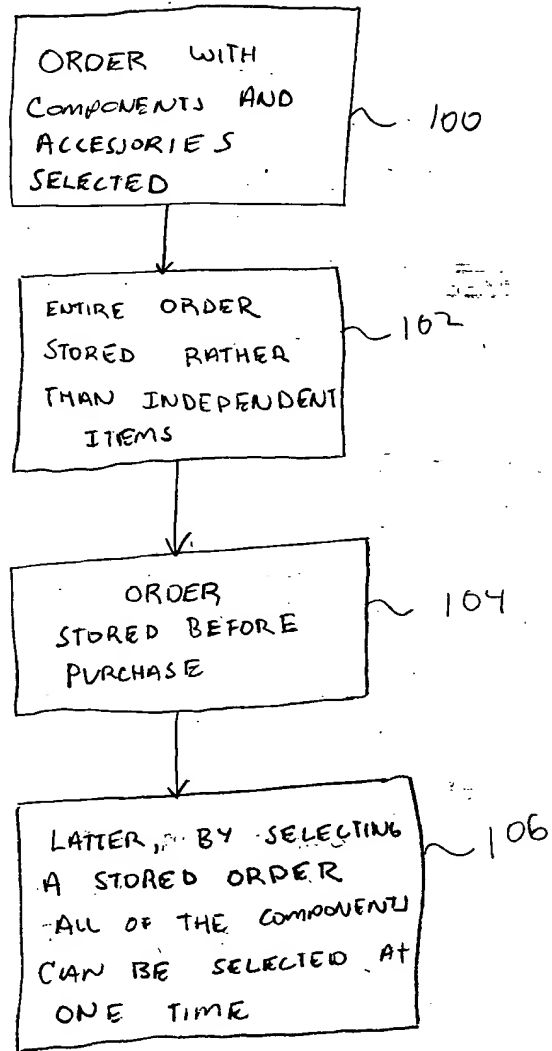


FIGURE 5

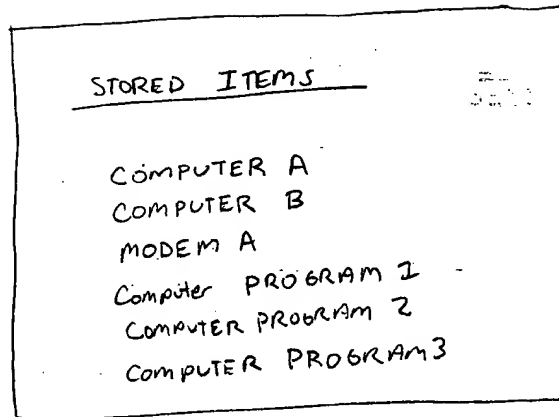


FIGURE 6

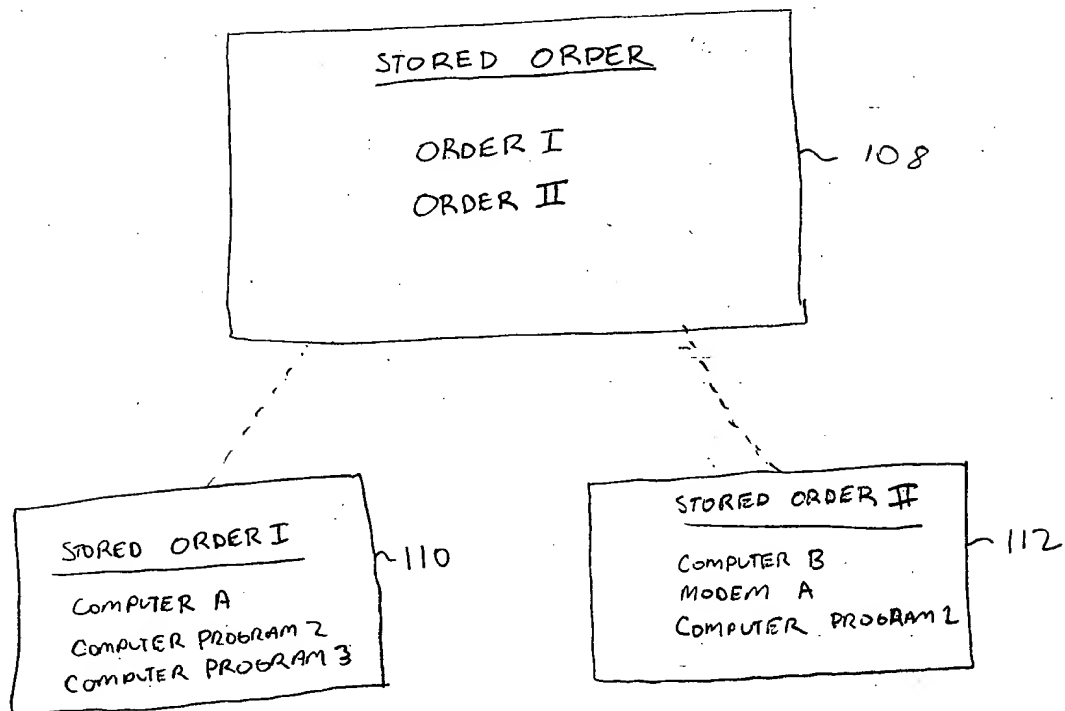


FIGURE 7

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FIGURE 8A

Review saved orders.

● Click on an order number below to view saved order in detail.

Or

● Click on the Continue button to purchase saved items.

Order Number	Date Saved	Subtotal
<u>W734942</u>	May 25, 2000	\$1,599.00
<u>W734980</u>	May 25, 2000	\$1,779.00
<u>W735003</u>	May 25, 2000	\$1,647.00

Continue

Continue

Continue

Continue Shopping

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FIGURE 8 B

Review saved order.

- Click on the Continue button to purchase saved items.

Or

- [E-mail](#) saved order.

Your order has been saved for later.

Web Order Number: **W735003**

Items you have selected	Part No.	Qty	Unit Price	Ext. Price
iMac 400MHz DV Special Edition	Z01R	1	\$1,499.00	\$1,499.00
Accessory kit	065-1945			
Graphite	065-2066			
128MB SDRAM - 1 DIMM	065-2042			
Quake III - Activision	T2469LL/A	1	\$49.00	\$49.00
Imega USB Zip Drive	T2224LL/A	1	\$99.00	\$99.00

Subtotal Please note that your subtotal does not include sales tax or rebates. **\$1,647.00**

[Find out how to get your order for \\$37.72 per month*](#)

[Continue Shopping](#)

[E-mail](#)

[Continue](#)

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FIGURE 8C

Review saved order.

- Click on the Continue button to purchase saved items.

Or

- [E-mail](#) saved order.

Web Order Number: **W734942**
Date: **May 25, 2000**

Items you have selected	Part No.	Qty	Unit Price	Ext. Price
Power Mac G4	201W	1	\$1,599.00	\$1,599.00
64MB SDRAM - 1 DIMM	065-1526			
USB Keyboard	065-1995			
10GB Ultra ATA drive	065-2138			
400MHz PowerPC G4 - 1MB L2 cache	065-2094			
56K internal modem with FAXstf	065-2233			
DVD-ROM drive with DVD-Video	065-1902			
10/100BASE-T Ethernet built-in	065-2136			
RAGE 128 Pro card - 16MB SDRAM	065-2100			
Accessory kit	065-2121			

Subtotal Please note that your subtotal does not include sales tax or rebates. **\$1,599.00**

Find out how to get your order for \$38.62 per month*

[Delete This Order](#)

[E-mail](#)

[Continue](#)

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FIGURE 8D

